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ABSTRACT

The instructional technology committee of the North Central Association (NCA) of Schools and Colleges has developed a preliminary inventory on policy and program for instructional technology. This inventory is general and qualitative to facilitate its use by the various member institutions. Its purpose is to assist institutional self evaluation, facilitate visits by NCA evaluation teams and consultants, and to provide teacher training students with a resource and insights into instructional technology. The inventory has two parts: a policy and program inventory for instructional technology, and a checklist of specific items identifiable with policy and programs. (CH)

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Inventory of Policy and Program for Instructional Technology

by

Ad Hoc Committee on Instructional Technology

Commission on Research and Service

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INTRODUCTION

Instructional technology has become an integral part of American education. It is found in the smallest and largest schools and colleges in some form or other. Because of this increasing implementation and because of continuing interest on the part of member institutions of the North Central Association of Colleges and Schools, the NCA Commission on Research and Service charged its Committee on Instructional Technology to develop this preliminary inventory on policy and program for instructional technology.

Instructional technology is defined as the combination of human and nonhuman resources employed in a systematic way in the design, implementation, and evaluation of the total process of learning and teaching, to bring about the improved effectiveness of learning. It links the human resources of specialists in curriculum and instructional design, evaluation, and media with the nonhuman resources of instruction/information networks which include materials and machines for print, audiovisual media, television and radio, amplified telephone, learning laboratories, the computer, games and simulation, and teaching machines.

After four years of committee staff work, a national invitational seminar/workshop, and feedback from over 500 NCA member schools and postsecondary institutions received at the past four NCA annual meetings, the committee reports this inventory of instructional technology.

This publication is the end product of the first phase of the Instructional Technology Project, which included the research, development, pretest, drafting, and publication of this inventory. The proposed second phase of the project is planned to include the dissemination and further refinement of this preliminary inventory. It is the committee's hope that the results of its total effort will underscore the essentiality of instructional technology in contemporary education and, thus, will insure the inclusion of this facet of the educational program in all internal and external programmatic evaluations.

In keeping with NCA precedent, this inventory is general and qualitative to better facilitate its use by the variety of elementary through postsecondary institutions. It is designed to be used by schools and postsecondary institutions for the following purposes:

1. To assist faculty, staff, and administration in the planning and evaluation of policies and programs for instructional technology. Institutional self-study committees will find this inventory useful when con-

ducting a self-study and preparing for a visit by an NCA evaluation team.

2. To facilitate visits conducted by NCA evaluation teams and consultants. Visiting teams, in consultation with their host institutions, can use this inventory as a general outline for considering instructional technology.

3. To provide teacher-training students with a resource and valuable insights into policies, programs, and applications of instructional technology.

For more specific and quantitative information on developing instructional technology policy statements and programs, the NCA Committee on Instructional Technology commends three national associations for their excellent published standards. These are the Association for Educational Communications and Technology, the National Council for Accreditation of Teacher Education, and the American Association of School Librarians. Further, the committee gratefully acknowledges contributions to this booklet of publications of AECT, NCATE, and AASL, and the instructional technology program descriptions of the Lincoln, Nebraska, Public Schools and Pennsylvania State University.

Additional information and an instructional technology bibliography may be obtained from the chairman of the Committee on Instructional Technology:

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This booklet's contents are organized within two main parts:

1. Policy and Program Inventory for Instructional Technology

2. Checklist of Specific Items Identifiable with Policy and program

PART 1

POLICY AND PROGRAM INVENTORY FOR INSTRUCTIONAL TECHNOLOGY

A. EXPLANATION

Only eight general and qualitative inventory items are presented before the time when self-study committees, evaluation teams, and consultants have had experience with them. However, the three policy items and the five program items below are explained in further detail in the checklist items under each corresponding heading in Part 2. For example, in Part 2 under "Policy," there are five checklist items under "Administration."

B. POLICY

1. Policy Statement

Is there an established institution-wide policy statement on instructional technology?

_____ (yes) _____ (no)

2. Administration

Is the instructional technology program administered and/or coordinated by a highly qualified person at a sufficiently high level in the administrative structure?

_____ (yes) _____ (no)

3. Goals and Objectives

Does the policy statement provide for criteria to be used in the application of instructional technology to instructional (and management) goals and objectives of the institution?

_____ (yes) _____ (no)

C. PROGRAM

1. Definition

Is instructional technology defined as a means of improving the effectiveness and efficiency of learning and teaching?

_____ (yes) _____ (no)

2. Integration into Curriculum Design

Is the instructional technology program integrated into the ongoing process of curriculum design, development, and evaluation?

_____ *(yes)* _____ *(no)*

3. Program Services

Does the program provide instructional technology services of sufficient quality and quantity to adequately support the institution's instructional (and management) goals and objectives?

_____ *(yes)* _____ *(no)*

4. Personnel

Does the program provide for adequate professional, supervisory, and staff personnel--reporting to the instructional technology administrator--to support the instructional technology program services?

_____ *(yes)* _____ *(no)*

5. Facilities

Are the instructional technology facilities (space, equipment, distribution systems) adequate to support the instructional technology program services?

_____ *(yes)* _____ *(no)*

PART 2

CHECKLIST OF SPECIFIC ITEMS IDENTIFIABLE WITH POLICY AND PROGRAM

A. EXPLANATION

The following checklist items are listed to explain and augment the preceding eight general policy and program items. Although the checklist items, as with the general policy and program items, are general and qualitative, they should be specific and inclusive enough to facilitate evaluation of an institution's instructional technology policy and program. Self-study committees, evaluation teams, and consultants, of course, could modify this checklist to meet their needs. For example, five or more rating levels could be substituted for the two-level ratings, "observed" and "not observed."

B. POLICY

Observed	*Not Observed*	
		1. Policy Statement A policy statement may apply to an individual school with its own policy or to a school adopting its school district's policy statement (with or without modification), and to a college or university, or any divisions thereof.
		2. Administration
_____	_____	a) The policy statement should specify who has responsibility for the integration of instructional technology into curriculum design.
_____	_____	b) The administrator of the instructional technology program often has such a title as Assistant Principle; Director, Instructional Media Center; Assistant Superintendent; Assistant to the Superintendent; Vice President; Assistant to the President.
_____	_____	c) The instructional technology administrator should have ready access to the institution's top administrator or the top echelon of administration.

Observed	*Not Observed*	
_____	_____	d) In addition to sharing responsibility for developing policy, the instructional technology administrator should have authority to act on adopted policy.
_____	_____	e) Although the instructional technology program should be the responsibility of a single administrator, either a centralized or decentralized operation is permissible, as long as the program is effective.

3. Goals and Objectives

The policy statement should:

_____	_____	a) provide for the inclusion of instructional technology into curriculum design;
_____	_____	b) provide for the development of priorities for projects using instructional technology;
_____	_____	c) specify how instructional technology should be allocated in support of priority programs and projects;
_____	_____	d) include standards for instructional technology systems, including personnel, materials, space, and equipment:
_____	_____	e) provide for ongoing commitment and support from all appropriate administrative levels after a project, such as a course or course segment, has been developed and proven operational.

C. PROGRAM

1. Definition

Instructional technology should be defined as the combination of human and nonhuman resources employed in a systematic way in the design, implementation and evaluation of the total process of learning and teaching, in terms of objectives based on research in human

Observed	*Not Observed*	
		learning and communication, to bring about more effective learning.
		2. Integration into Curriculum
		a) The instructional technology program should be an integral part of the institution's total curriculum development program.
		b) The immediate responsibility for integrating instructional technology into curriculum and instructional design should be that of the chief instructtional technology officer working with or for the chief curriculum or academic officer.
		c) A clearly defined procedure for the integration of instructional technology into curriculum design should be known by faculty and staff.
		3. Budget
		The institution's budget should provide appropriations for instructional technology personnel, equipment, materials, maintenance, and other expenses, and a system for cost accounting of the same.
		4. Program Services
		a) Procurement of Materials
		1) The program should provide adequate procedures for evaluating, purchasing, and renting existing instructional materials. A reasonable percentage of the instructional budget should be allocated to the purchase, rental, and production of instructional materials.
		*b) Design/Production/Testing Services**

* A useful description of these services is found in: Cavert, C. Edward, *An Approach to the Design of Mediated Instruction.* AECT, 1201 16th St., N.W., Washington, D.C. 20036. 1974.

Observed	*Not Observed*	
_____	_____	1) The design process should assist individual faculty members to systematically design their courses or course segments based on objectives (behavioral, cognitive, affective, or however stated).
_____	_____	2) The total design/production/testing process should include such steps as (a) design, (b) production, (c) testing, (d) revision, and (e) dissemination.
_____	_____	3) Services should be available to assist the faculty in the construction of tests that determine student achievement of course or course segment objectives.
_____	_____	4) Assistance should be supplied to faculty in the development of syllabi, of student study guides and workbooks, and of instructor's guides and manuals.
_____	_____	5) Assistance should be supplied to faculty in the development of various instructional modes such as: audiovisual media (overhead projectors, slide and film strip projectors, 16mm and 8mm film projectors, tape recorders, record players, still and flat pictures, maps and globes), television (broadcast, closed circuit, cable, cassette), radio, language laboratories and learning centers, dial access, programmed instruction, computer and teaching machines, and games and simulation.
		c) Delivery System Services
_____	_____	For all of the above mentioned instructional modes (4.b.5), there should be delivery systems consisting of adequate (1) storage, (2) retrieval, (3) distribution, (4) display, (5) utilization, and (6) feedback functions.

Observed	Not Observed	
		d) Research and Evaluation Services These services should include both long- and short-range research. They should include such services as: (1) test construction, (2) pretesting of instructional materials on small groups, (3) field testing of courseware on large groups over extended periods of time, (4) continuing evaluation of each of the instructional technology program's component parts (design/production, delivery, testing, research, management), and (5) provisions linking evaluation services to design and production efforts.
		e) Design of Learning Facilities The instructional technology program should be able to supply design (design, purchase, installation) capability for the inclusion of instructional technology into buildings and for media hardware and software systems.
		f) In-Service Training 1) The program should provide regular instructional technology workshop seminars, and in-service training programs for teachers, administrators, and other staff.
		2) Small grants-in-aid should be available to individual teachers, supervisors, administrators, and other professional staff for improvement of teaching and learning projects to cover reasonable and necessary production costs.
		3) The program should provide for rotating internships for teachers and other professional staff in designing/producing/testing instructional materials.
		4) The program should provide release time for special curriculum development projects.

Observed	*Not Observed*	
		g. Information Service
		1) The instructional technology program should provide an information service for teachers, staff, and administrators that would make known the relevant, current uses of instructional technology in support of instructional (and management) goals and objectives.
_____	_____	
		2) Regular correspondence with other institutions with instructional technology programs should be a part of this service.
_____	_____	
		3) Memberships of the institution, faculty, and staff in professional associations related to instructional technology should be included in this service.
_____	_____	
		h) Improvement of Learning Program
		1) Many institutions have established major improvement of learning programs to help solve major institutional instructional (and management) problems. These major programs, however, should in no way eliminate the small grant program for individual teachers wishing to improve teaching and learning in their individual classrooms.
_____	_____	
		2) These major programs should make use of criteria for selecting projects, including one or more of the following:
		(a) The project relates to a course that serves substantial numbers of students, and/or meets some critical institutional need.
_____	_____	
		(b) There is at least one other faculty member who will serve as a colleague consultant to the educational author and the project.
_____	_____	

Observed	*Not Observed*	
_____	_____	c) There is evidence of a need for the improvement of instructional effectiveness and/or instructional economy.
_____	_____	d) The project has a clear statement of goals (general objectives) indicating how instruction may be improved.
_____	_____	e) The project will be systematically designed and will be based on published objectives.
_____	_____	f) The project will be evaluated in terms of the published objectives.
_____	_____	g) Other things being equal, the project has potential for improved cost effectiveness or instructional efficiency.
_____	_____	h) The project has a commitment from all appropriate administrative levels.
_____	_____	i) The project will be submitted to peer review.
_____	_____	j) Marketable instructional materials produced will be copyrighted by the institution and royalties shared with the authors and others, in comformity with institutional policy.
		i) Master Technical Plan
_____	_____	1) The program should include a master technical plan for all components of instructional technology as a blueprint for future development.
		2) This technical plan should include procedures for the purchase of equipment to assure (a) compatibility of equipment,

Observed	*Not Observed*	
		(b) ease of maintenance, (c) economy of mass purchasing, (d) suitability of equipment to prescribed needs, and (e) simplicity of operation.
		j) Utilization Reports
		The program should include utilization reports showing the frequency of use of equipment, materials, and instructional technology systems in support of instructional (and management, goals and objectives.
		5. Personnel
		Professional, paraprofessional, supervisory, and staff personnel are involved in an instructional technology program. Job descriptions should differentiate the responsibilities of the instructional technology team and should be updated periodically to assure efficiency and effectiveness of professional and paraprofessional roles. Instructional technology personnel include such as the following:
		a) Educational authors (teachers)
		b) Colleague consultants
		c) Curriculum specialists
		d) Instructional design specialists
		e) Test construction specialists
		f) Evaluation specialists
		g) Media specialists
		h) Design and installation technicians
		i) Operating and maintenance technicians
		6. Facilities
		Facilities for instructional technology programs include such as the following:

Observed	*Not Observed*	
		a) Centers where instructional technology programs are located, e.g., instructional media centers, instructional services centers, audiovisual centers, instructional resources centers
		b) Film libraries, separated or a part of the instructional technology program center
		c) Language laboratories
		d) Learning laboratories
		e) Professional libraries for staff and faculty
		f) Regular libraries, separate or a part of the instructional technology program center
		g) Media procurement, production, storage, delivery, and display capabilities for:
		1) Slides
		2) Film strips
		3) Overhead transparencies
		4) Audio tapes, cassettes, records
		5) 16mm films
		6) 8mm films
		7) Reading devices
		8) Still and flat pictures
		9) Maps and globes
		10) Graphics
		11) Models
		12) Science kits

Observed	*Not Observed*	
_____	_____	13) Games and simulation
_____	_____	14) Television tapes and cassettes
_____	_____	15) Broadcast television
_____	_____	16) Closed circuit television
_____	_____	17) Cable television
_____	_____	18) Broadcast radio
_____	_____	19) SCA radio
_____	_____	20) Amplified telephone
_____	_____	21) Programmed instruction, teaching machines, computer-managed and computer-assisted instruction
_____	_____	22) Printed material, photo copying, low cost printing, regular printing (separate or as a part of the instructional technology program center)